

REMARKS

Claims 1, 3, 7, 9 – 11 and 25 remain in this application. Claims 4 – 6 and 8 have been canceled. Claims 2 and 26 – 48 were previously canceled. Claims 12-24 and 27 were previously withdrawn. Claims 1, 3, 7 and 25 are currently amended.

Claim 1 was amended to include water which was included in original Claim 25 and was referred to in the original specification in paragraph [0052] first sentence: "The compositions of this invention are oil-in-water emulsions..." In addition, claim 1 was amended to include a salt of a straight chain saturated fatty acid as representative of the emulsifier to allow for the mixture of water and oil. Support for this specific type of emulsifier was represented in original claim 8, which is now canceled. Finally, claim 1 was amended to include "titanium dioxide, zinc oxide, or combinations thereof" to be a more specific representation of at least one inorganic, non-endocrine disrupting sun-blocking agent. Support for these inorganic sun-blocking agents were represented in the original claim 5, which is now canceled. Additionally, claim 1 was amended to a "non-endocrine disruptive, cytoprotective" sun-block composition.

As noted by the examiner, the informality of claim 3 has been amended to be dependent upon claim 1 rather than canceled claim 2. Additionally, claim 3 was amended to a "sun-block" which includes "a cytoprotective substance such as glucose-rich-mannose" oligosaccharides of "cold-pressed" *aloe barbadensis*

Miller. Support for this element is represented in the original specification, page 10, paragraph [0039].

Claim 7 was amended to depend on claim 1 rather than claim 5, which is now canceled. Additionally, Claim 7 has been amended to change titanium dioxide to zinc oxide with a particle size of less than about 30 nm as was supported by the original Claim 7. Claim 7 was also amended to "zinc oxide" with "a primary particle size of less than about 50 nm" as was supported by original specification paragraph [0016], page 6 referring to US Patent No. 5,340,567 which was incorporated by reference.

Claim 25 was amended to "a method of making a non-endocrine disruptive, cytoprotective sun-block composition" to match claim 1 as an embodiment of the present invention.

Applicant respectfully submits that Lukenbach et al. (US 5,980,871) includes endocrine disrupters and does not teach non-endocrine disrupting agents. In fact, Lukenbach et al. specifically teaches the use of the known endocrine disrupter octylmethoxycinnamate in Example 95. This compound was specifically noted as an endocrine disrupter by Schlumpf et al. in the referenced article "Estrogen Active UV Screens" that is included on page 2, paragraph [0004] and in the original IDS of the present application.

In addition, currently amended claim 1 includes cytoprotective substances which teach away from Lukenbach et al. Examples 1-13 in Lukenbach et al. teach the use of Carbopol 940 - an acrylic polymer for thickening which uses benzene as a substituent and which is a known carcinogen. Furthermore, Lukenbach et al. teaches the use Dowicil 200 that releases formaldehyde, also a

known carcinogen, cited in Examples 1-17, Comparative Examples 98 and 99, and Example 100M. Finally, Comparative Example 99 of Lukenbach, et. al. includes the use of Disodium EDTA, which is another known carcinogen. The present application teaches the use of cytoprotective (anti-carcinogenic) substances thus again teaching away from the cited patent by Lukenbach.

Lukenbach et al. in addition does not teach the use of cold-pressed aloe, which is essential to one embodiment of the claimed invention and could not be obvious in light of Strickland et al. (US 5,824,659) since Strickland et al. teaches aloe for alleviation of post-UV-induced skin immune damage, not UV skin damage protection.

The elements of the present invention have never before been combined in this manner nor has there been any hint of success in combining these ingredients to provide a healthy cytoprotective, immuno-enhancing, non-endocrine disruptive sun-block. Strickland et al. does not teach any solution to the problem presented in the present application. The novelty of the present invention combines three distinct differences in comparison with Lukenbach et al. or Luckenbach and Strickland, et. al., specifically;

1. the use of elements which are limited to non-endocrine disrupting agents
2. teaches the use of cytoprotective (anti-carcinogenic) substances.
3. the use of cold-pressed aloe

Appl. No. 09/682,249
Amdt. dated July 8, 2004
Reply to Office Action of March 24, 2004

Applicant respectfully requests that this case now be completed and a
timely Notice of Allowance issued.

Dated this 8th day of July, 2004

Respectfully Submitted,

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RE: Application No. 09/682,249 Originally Filed: August 9, 2001

Attn: Marina Lamm
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Examiner Lamm,

Included herein is a copy of the response to the Office Action dated March 24, 2004 and form PTO/SB/22, a Petition for Extension of Time under 37 CFR 1.136(a). I appreciate your consideration of the response and accompanying amendment in the application for patent.

Best regards,


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